What is claimed is:

1. A method of producing a body ply material for a pneumatic tire, comprising the steps of:

manufacturing a ribbon (39) of a predetermined width (E) dimension in the form of a cord having a rubber covering applied thereto;

spirally winding said ribbon (39) on an outer peripheral surface of a drum (35, 36), and bonding lateral edges of said ribbon to each other to manufacture a wrapper (40);

setting a peripheral length (M) dimension of the outer peripheral surface of said drum (35, 36) to the same as or integral multiples of a width (W) dimension of body ply materials (46A, 46B) for use in a tire; and

setting a winding length (L) in a drum longitudinal direction of said wrapper (40) equal to a length dimension (L1) of said body ply materials (46A, 46B) for use in a tire.

2. The method of producing a body ply material for a pneumatic tire according to claim 1, wherein after the step of manufacturing the wrapper, said wrapper on one drum is cut at one location in the longitudinal direction of the drum to produce a body ply material for one tire.

3. The method of producing a body ply material for a pneumatic tire according to claim 2, wherein said wrappers on a plurality of drums different in the peripheral length (M) dimension are cut at one location in the longitudinal directions of said drums, respectively, to produce two body ply materials different in width dimension for use in one tire.

4. The method of producing a body ply material for a pneumatic tire according to claim 1, wherein after the step of manufacturing a wrapper, said wrapper on one drum is cut at two locations in the longitudinal direction of said drum to produce two body ply materials for use in one tire.

5. The method of producing a body ply material for a pneumatic tire according to claim 4, wherein said wrapper is cut at two locations such that two body ply material differs in the width (W) dimension from each other.

6. The method of producing a body ply material for a pneumatic tire according to claim 1, wherein a finish end of the ribbon wound on the drum is cut at a right angle to the longitudinal direction of the ribbon.

7. The method of producing a body ply material for a pneumatic tire according to any one of claims 2 to 5, wherein said wrapper is cut along a gentle curve which is substantially orthogonal to the longitudinal direction of the ribbon wound on said drum.

8. The method of producing a body ply material for a pneumatic tire according to claim 7, wherein said wrapper is cut along said gentle curve which passes a winding start end and a winding finish end of the ribbon.

9. A device for producing a body ply material for a pneumatic tire, comprising:

a ribbon manufacturing device for manufacturing a ribbon (39) of a predetermined width (E) dimension in the

form of a cord having a rubber covering applied thereto;

a ribbon winding mechanism (38) for spirally winding sid ribbon (39) on an outer peripheral surface of a drum (35, 36); and

a bonding mechanism (127, 128, 129) for bonding lateral edges of the ribbon to manufacture a wrapper (40),

wherein a peripheral length (M) dimension of the outer peripheral surface of said drums (35, 36) is set to the same as or integral multiples of a width (W) dimension of body ply materials (46A, 46B) for use in a tire; and

a winding length (L) in a drum longitudinal direction of said wrapper (40) is set equal to a length dimension (L1) of said body ply materials (46A, 46B) for use in a tire.

10. The device for producing a body ply material for a tire according to claim 9, comprising a wrapper cutting mechanism (44) for cutting said wrapper (40) along a gentle curve which is substantially orthogonal to the longitudinal direction of the ribbon to form body ply materials (46A, 46B) of a predetermined width (W) dimension.

11. The device for producing a body ply material for a tire according to claim 10, wherein said ribbon winding mechanism (38) comprises a ribbon winding guide (120) corresponding to the drums (35, 36) rotatably supported by frames (32, 33), and a relative movement mechanism (113, 114, 115, ...) for relatively moving said drums (35, 36) and said ribbon winding guide (120) in an axial direction of the drums at a predetermined feed speed.

12. The device for producing a body ply material for a

tire according to claim 10 or 11, wherein start end holding mechanisms (35a, 36a) capable of holding a winding start end of the ribbon are provided for the drums (35, 36).

13. The device for producing a body ply material for a tire according to claim 10 or 11, wherein said ribbon winding mechanism (38) comprises a ribbon cutting mechanism (141, 142, 143, 144) for cutting a winding finish end of the ribbon wound on the drum.

14. The device for producing a body ply material for a pneumatic tire according to any one of claims 10 to 13, wherein said wrapper cutting mechanism (44) comprises a cutter (159) disposed corresponding to said drums (35, 36) for movements into contact with and away from the drums, and a moving mechanism (154, 155, 156, ...) for moving said cutter (159) along a gentle curve which is substantially orthogonal to the longitudinal direction of the ribbon wound on the drum, while holding said drums (35, 36) in a non-rotating state.

15. The device for producing a body ply material for a pneumatic tire according to any one of claims 10 to 13, wherein said wrapper cutting mechanism (44) is configured to move the cutter (159) disposed corresponding to said drums (35, 36) for movements into contact with and away from the drums in a direction parallel with the axial direction of the drums, and slowly pivoting said drums (35, 36) to cut the wrapper along the gentle curve which is substantially orthogonal to the longitudinal direction of the ribbon wound on the drum.

16. The device for producing a body ply material for a tire according to claim 13, wherein blade grooves (35c, 36c) are provided in the outer peripheral surfaces of said drums (35, 36) for cutting said wrapper (40) along a gentle curve which is substantially orthogonal to the longitudinal direction of the ribbon wound on the drum, wherein a blade edge of said cutter (159) is guided by one edge of said blade groove (35a, 36a) to cut the wrapper (40).

17. The device for producing a body ply material for a tire according to any one of claims 10 to 13 or 15, wherein said frame (32) comprises a body ply material peeling mechanism (47) for peeling the body ply material from said drum.

18. The device for producing a body ply material for a tire according to claim 17, wherein said frame (32) comprises a tray (50) for receiving and supporting a body ply material peeled from the drum, said tray being transported to a direction intersecting the axial line of the drum by a tray transporting mechanism (48).

19. The device for producing a body ply material for a tire according to claim 18, wherein said body ply material peeling mechanism (47) is configured to transfer the body ply material on said tray (50) which is moving in a transporting direction, while peeling the body ply material from the drum in a rotating state.

20. The device for producing a body ply material for a tire according to claim 10 or 11, wherein said drums (35, 36) are disposed at a plurality of locations, and each of

said drums is configured to be switchable among a ribbon winding position, a ribbon bonding position, a wrapper cutting position, and a body ply material peeling position by a position switching mechanism (34).

21. The device for producing a body ply material for a tire according to claim 10 or 11, wherein said drums (35, 36) comprise a drum diameter changing mechanism (53) for enlarging and reducing outer diameters thereof.

22. The device for producing a body ply material for a tire according to claim 20, comprising:

a drum reversing/supporting mechanism (34) for rotatably supporting the pair of drums (35, 36) having the same outer diameter, and formed with blade grooves (35c, 36c), and functioning as a position switching mechanism for alternately reversing said drums to two positions,

wherein a ribbon is wound on the outer periphery of a drum placed at one position by the drum reversing/supporting mechanism (34) to form a wrapper (40), and

said wrapper (40) on the outer periphery of the drum reversed to the other position by said drum reversing/supporting mechanism is cut along the blade groove of the drum to form a body ply material.

23. The device for producing a body ply material for a tire according to claim 17, wherein said body ply material peeling mechanism (47) comprises a peeling tool (163) for partially peeling an edge of a cut body ply material, following cutting of the wrapper, and a rotating peeling bar (175) entering a gap (G) of the cut edge, formed by the peeling tool, to transfer the body ply material onto

the tray (50).

24. The device for producing a body ply material for a tire according to claim 13, wherein said wrapper cutting mechanism (44) comprises a roller (160) for pressing the wrapper ahead of said cutter (159).

25. The device for producing a body ply material for a tire according to claim 18, wherein said tray transporting mechanism (48) comprises a pressing force adjusting mechanism (201, 202, 204, 214 ...) for adjusting a pressing force of the tray to the drums.

26. The device for producing a body ply material for a tire according to claim 22, wherein said ribbon winding mechanism (38) is configured to perform a winding operation for the drums in an outgoing stroke and a returning stroke of reciprocal movements in a direction parallel with the axial direction of the drums.

27. The device for producing a body ply material for a tire according to claim 9, wherein said ribbon (39) is formed by transferring a cord (39a) made of a plurality of twisted filaments (39c) through a twist-back member (311) in the longitudinal direction to twist back the respective filaments (39c) and form predetermined spacings between the filaments, passing the cord (39a) in this state through a softened rubber to form a rubber layer (313) over the outer periphery of each filament (39c), and after the respective filaments (39c) return to the original twisted state by their own twisting stresses, passing a plurality of similarly fabricated cords (39a) arranged in parallel through a rubber extruder to flatly coat a rubber

coating (39b) on the rubber layer (313) of each cord (39a).